

diluted with an equal portion of water, 6—8 grammes, have been of service in some cases. He has had no experience with amyl nitrite. In the intervals between the attacks, M. Sée directs the use of bromide of potassium and digitalis, prescribes quiet, and a temperate mode of life, forbids the use of tea, coffee, and tobacco, and of alcoholic drinks allows only a small quantity of wine.

THE PATHOLOGICAL INFLUENCES OF THE FIFTH NERVE. At the meeting of the Aberdeen Branch of the Brit. Med. Association, Mar. 1. (rep in *Brit. Med. Journal*, May 18) Dr. Davidson, of Aberdeen, read a communication in which he said he brought the subject under the notice of the members in the hope that, by suggestions or analogous cases being brought forward, a proper estimate might be formed of a curious factor in many pathological processes. The cases noted were those of morbid changes, occurring in the area of the fifth nerve, which seemed directly attributable to irritation of its terminal branches, causing various changes in nutrition, sensation and motility of the parts thus influenced. Case I. A woman aged 34, breaking wood with an axe three years ago, received a blow on the left side of the forehead from a splinter, which cut and bruised it considerably; almost immediately after vision began to fail, and when first seen, eighteen months afterwards, ophthalmoscopic examination discovered inflammation of the left optic nerve, and the light was only one-sixth normal. Treatment removed the inflammation, but optic atrophy remained, and she was practically blind on that side.

Case II. A woman, aged 40, struck her right forehead against a gas-bracket in the dark, wounding herself about an inch above the eyebrow. Almost immediately after this, the sight of the right eye began to decline, and, on being seen six weeks after the injury, the eye was found glaucomatous, with the tension increased; the pupil seemed dilated and fixed; accommodation was impaired and the anterior chamber was dimmed. Iridectomy was performed, and the sight improved from one-eighth to one-third.

Case III. A boilermaker, by falling into the ship's hold three years and a half ago, received a very severe and deep wound in the right eyebrow. The supra-orbital nerve must have been wounded, for he had a curious feeling from the brain to the crown of the head, "as if he had struck on the funny-bone;" and this increased on exposure to cold. Soon after, retino-choroiditis was discovered in the right eye, with the sight reduced to $\frac{1}{4}$. Six months ago, he was again seen and the sight was found quite lost. These three cases were similar in this, that irritation of the supra-orbital nerve, or its branches, by injuries, causes trophic changes in the textures within the eyeball; and there was reason to believe these arose from the reason above stated, and might involve the optic nerve and the choroid, and produce changes in the intra-ocular pressure with its destructive results—in short, the nutrition of the whole globe. Besides these trophic changes, the wounding of the first division

of the fifth pair might entail other consequences, such as the influencing of the motor seventh-pair, as in the following case. J. S., aged 40, a school-mistress, received, fourteen years before being seen, a blow from a stone on the left temple, which caused a cicatrix, which was constantly painful for four or five months after the injury, and then, after this, painful only on exposure to wind and cold, and gradually subsiding till twelve years after the accident when the left side of the face became affected with spasm, occurring occasionally during the day, difficulty of swallowing, and regurgitation of fluids through the nose.

Herpes frontalis which occurred where the skin was supplied by the supra-orbital nerve, together with a very dangerous ulceration of the cornea, often entailing the loss of the eye, had been found on *post mortem* examination to have the gasserian ganglion very seriously altered. In regard to the second division of the fifth-pair, the author had not so many cases to adduce, but he mentioned one of a delicate girl, aged 8, who became affected with almost total blindness, which was cured in a day or two by the removal of some carious upper back teeth; and another of a lady, aged 50, who suffered excruciatingly from neuralgia in the right side of the forehead and temple, whenever an ulcer of a chronic nature in the roof and septum of the right nostril broke out, and which was at once cured by healing the ulcer by mitigated nitrate of silver, and by quinine and iron. In regard to the third division he would not make any lengthened remarks, as he had no illustrative cases. He was inclined to think that irritation of its peripheral twigs was not so provocative of morbid disturbances as that of the first two divisions, owing perhaps, to its being a mixed motor and sensory nerve and one of special sense also. As to explanation, some supposed that the primary irritation of the inflammation of the injured periphery of the nerves tends to travel backwards to the nervous centres, or influence the irritation of those centres. This was, no doubt, seen in the acute injuries, producing tetanus, for example, but could not be accepted as explaining the chronic cases given above.

Neither could it be supposed that an ill-developed myelitis was the cause, although this view had been recently held as an explanation of "the frequent occurrence of double neuro-retinitis in diphtheria, but as this so called neuro-retinitis presented, when examined by the ophthalmoscope, the same appearances as were seen in sensory and in other conditions where the blood was poor, it was more likely simply anæmia, one of the most frequent sequelæ of diphtheria, and, therefore, could not be considered as being really inflammatory at all. There was an analogy between the condition under notice, and "spinal irritation," where there was great hyperæstheria of a certain area of sensory nerves whose irritation led to many curious motor and sensory disturbances. This spinal irritation was supposed by Hammond to be caused by anæmia of the cord from irritation of the vaso-motor nerves; while another observer thought that hyperæmia of the blood-vessels at the origin of the spinal nerves was the cause, and noted, in confirmation of his view, that leeches and counter-irritants were the best remedies. All that could be said at present he thought was, that these nervous complications must depend on some

changes in the nervous centres—be it hyperæmia, anæmia, or real texture lesion not yet perhaps recognized. How to discriminate between these varied causes was difficult, but valuable indications were to be obtained from the general condition of the patient. Each case must be impartially judged on its own merits; and the eccentric irritation must be carefully sought for, and judiciously treated with special reference to the patient's general health.

GLOSSO-LABIO-LARYNGEAL PARALYSIS. Two cases of cure of this formidable disease have lately been reported, one in Vienna by Dr. Wilhelm, and one in England by Dr. Dowse, before the clinical society of London, (rep. in *Brit. Med. Jour.*, March 11). The patient was exhibited before the society and the following history given.

The patient's history was essentially neurotic. The mother, previously healthy, had died only a fortnight since from an attack of apoplexy, of twelve hours duration. The patient, when about twelve months old, suffered from convulsions, but grew out of them, went to school and was fairly intelligent. At the age of sixteen, he had a series of well-marked epileptic seizures of great severity, resulting in the paralysis of the whole body save those parts supplied by first, second, third, fourth and sixth nerves. The paralysis was complete of both motion and sensation. There was trismus of the jaw, from palsy of the pterygoids; also of the lips. He could neither bring them together nor perform the act of whistling. The saliva was constantly making its way from the mouth. The pillar of the soft fauces and palate were immovable. He was fed with fluids which often returned through the nostrils, and at times he was nearly asphyxiated by these passing into the larynx. Upon admission into the Central London Sick Asylum, at the age of twenty, most of the above signs and symptoms were well marked; but the paralysis of the upper extremities was gradually diminishing. He was of stunted growth and dark complexion, and was quite intelligent, though absolutely dumb, and had the greatest trouble in getting food into the pharynx. His best mode of procedure was that common in such cases—to fill the mouth, and with the fingers to push the food over the epiglottis into the bag of the pharynx. The tongue lay flaccid, wrinkled and immovable behind the lower row of teeth. Upon ophthalmoscope examination, the right eye showed cupping of the disk, with enlarged vessels. The left was similar, but the appearance less marked. The teeth were well defined, and gave no evidence of congenital syphilis. The vocal chords moved freely. The only sound he could make was a sort of grunt. The lower extremities were rigidly extended and absolutely devoid of both motion and sensation. The heels were well drawn up as in talipes-equino-valgus. Dr. Dowse then narrated the progressive return of voluntary power. So far as bulbar palsy was concerned, it first made itself evident in the motor division of the fifth by movement of the jaw; the lips could then be approximated; the saliva ceased to flow from the mouth; he could feed himself with slowness and some difficulty, but the tongue remained immova-